Pedro’s Tables

This problem gives you the chance to:
• work with number properties including divisibility
• explain your reasoning

Pedro chooses numbers to go in a table.

He can choose any whole number from 1 to 25.

<table>
<thead>
<tr>
<th></th>
<th>Multiples of 5</th>
<th>Multiples of 3</th>
<th>Square numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Even numbers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factors of 12</td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Prime numbers</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pedro says,

I can put 6 in this box. 6 is a factor of 12 and it’s a multiple of 3.

1. What other numbers could Pedro put in this box? ________________________________

2. The number 4 can go in two different boxes in the table. Write 4 in these two boxes.

3. Give a description of numbers that can go in the Even numbers and Multiples of 3 box.

_____________________________________________________________________________
4. Explain why there are no numbers that can go in the Factors of 12 and Multiples of 5 box.

_____________________________________________________________________________

_____________________________________________________________________________

5. Explain why there is only one number that can go in the middle box on the bottom row.

_____________________________________________________________________________

_____________________________________________________________________________

_____________________________________________________________________________
Pedro’s Tables

The core elements of performance required by this task are:
• work with number properties including divisibility
• explain your reasoning

Based on these, credit for specific aspects of performance should be assigned as follows

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>points</th>
<th>section points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gives correct answers: <strong>3, 12</strong>  (deduct 1 mark if additional numbers listed)</td>
<td>3, 12</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2. Writes 4 in the correct boxes: Right hand column, first and second rows</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>3. Gives correct answer such as: Multiples of 6</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
| 4. Gives correct explanation such as:  
‘The factors of 12 are 1, 2, 3, 4, 6 and 12. None of these are multiples of 5.  
12 is not divisible by 5.  
*Partial credit*
for a partially correct explanation |  | 2 | 2 |
| 5. Gives correct explanation such as:  
3 is a prime number and a multiple of 3. All other multiples of 3 have more than two factors so are not prime numbers. | | 1 | 1 |

**Total Points** 7